

(V)

wherein:

the carbon atom of formula (V) is in position 5 of the ring of formula (IV);

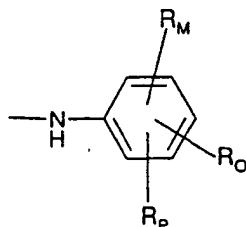
Q is -CH- or one oxygen atom;

q_A , q_1 , q_2 , q_3 , q_4 , are integers and independently the one from the other are 1 or 0; $q_2 = q_3 = q_4 = 0$ when the ring in formula (IV) is aromatic and $Q = -CH-$; $q_2 = q_3 = q_4 = 1$ when the ring of formula (IV) is a saturated ring with 6 atoms wherein the heteroatom is $Q = O$, and is in position 6 of the ring;

when $q_A = 1$ and G is the group of formula (Vg)

R_a and R_b , equal or different, are hydrogen, C_1 - C_3 alkyl, preferably methyl;

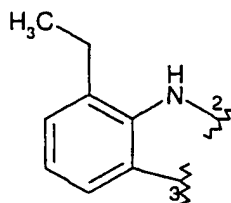
R_c in formula (IV) is hydrogen, C_1 - C_3 alkyl, or the following radical:



(VI)

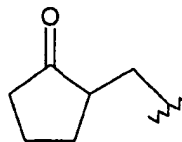
wherein R_M , R_O , R_P , equal or different, can be H, halogen preferably chlorine, C_1 - C_3 alkyl preferably methyl, CF_3 ;

R_q is hydrogen or $-OCH_3$, when the ring of fig. (IV) has 6 atoms; or it is an electronic doublet when the ring having 6 atoms is aromatic and M = nitrogen; or it is a p.chlorobenzoyl radical when $q_1 = 0$ and M = nitrogen and the ring of fig. (IV) is aromatic; or R_c and R_q taken together are such to form the following radical:



(VII)

R_d in formula (IV) is hydrogen, hydroxyl, C_1 - C_4 alkyl, optionally branched, phenyl, or the following radical:

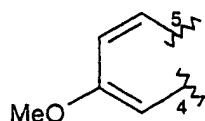


(VIII)

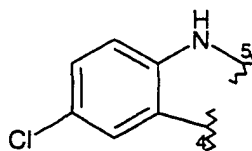
R_{d1} = hydrogen when $q_2 = 1$;

R_e (formula V) = hydrogen, halogen preferably F, or benzoyl; or

R_d and R_e taken together are such to form the following radicals:



(IX)



(X)

R_{e1} (formula V) = H when $q_3 = 1$;

R_N (formula IV) = C_1-C_3 alkyl preferably ethyl when $q_4 = 1$;

$T_1 = (CO)_t$ or $(X)_{t'}$, wherein $X = O, S, NR_{1c}$, R_{1c} is H or a linear or branched alkyl, having from 1 to 5 carbon atoms, t and t' are integers and equal to zero or 1, with the proviso that $t = 1$ when $t' = 0$; $t = 0$ when $t' = 1$;

$B = -T_B-X_2-T_{Br}-$ wherein

T_B and T_{Br} are equal or different;

$T_B = (CO)$ when the reactive function in the precursor drug is $-OH$ or $-NH_2$; $T_B = X$, as above, when the reactive function in the precursor drug is $-COOH$;

$T_{Br} = (CO)_{tx}$ or $(X)_{txx}$, wherein tx and txx have the value of 0 or 1; with the proviso that $tx = 1$ when $txx = 0$, $tx = 0$ when $txx = 1$; X is as above defined;

X_2 is a bivalent linking group as defined below;

C is the bivalent radical $-T_c-Y-$ wherein

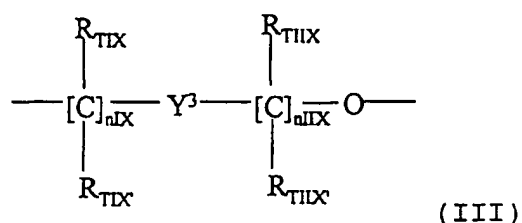
when $b0 = c0 = 1$: $T_c = (CO)$ when $tx = 0$, $T_c = X$ when $txx = 0$, X being as above defined,

when $b0 = 0$: $T_c = (CO)$ when $t = 0$, $T_c = X$ when $t' = 0$, X being as above defined,

when $c0 = 0$: $tx = 0$, $T_{Br} = X = -O-$;

Y has one of the following meanings:

Y_p :



wherein:

n_{IX} is an integer from 0 to 3, preferably 1;

n_{IIX} is an integer from 1 to 3 preferably 1;

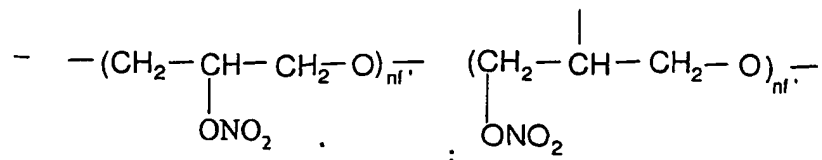
R_{TIX} , $R_{TIX'}$, R_{TIIX} , $R_{TIIX'}$, equal to or different from each other are H or linear or branched C_1 - C_4 alkyl; preferably R_{TIX} , $R_{TIX'}$, R_{TIIX} , $R_{TIIX'}$ are H.

Y^3 is a heterocyclic ring containing one or two nitrogen atoms, said heterocyclic ring being a saturated, unsaturated or aromatic ring, having 5 or 6 atoms;

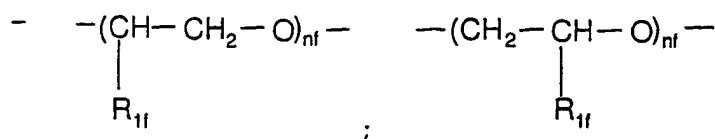
or Y may be:

Y_0 , selected from the following:

- an alkylenoxy group $R'O$ wherein R' is a linear or branched when possible C_1 - C_{20} , preferably having from 2 to 6 carbon atoms, or a cycloalkylene having from 5 to 7 carbon atoms, in the cycloalkylene ring one or more carbon atoms can be substituted with heteroatoms, the ring can have side chains of R' type, R' being as above; or one of the following groups:

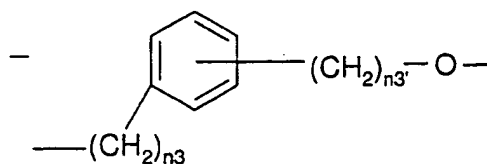


wherein nf' is an integer from 1 to 6 preferably from 1 to 3;

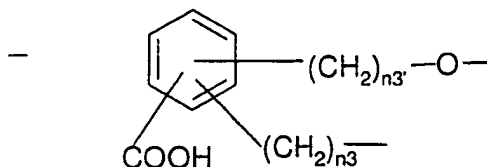


wherein $R_{1f} = H, CH_3$ and nf is an integer from 1 to 6; preferably from 2 to 4;

or Y is Y_{Ar} and is selected from the following:



wherein n_3 is an integer from 0 to 3 and n_3' is an integer from 1 to 3;



wherein n3 and n3' have the above meaning;

with the proviso that in formula (I) when $b_0 = 0$ and the bivalent radical Y of C is R'O, the radical R of formula (IV) of the drug is ferulic acid or flurbiprofen;

X_2 , bivalent radical, is such that the corresponding precursor of $B-T_B-X_2-T_{B1}$ wherein the free valences of T_B and T_{B1} are each saturated with OZ , with Z or with $-N(Z^I)(Z^{II})$, being:

- $Z = H, C_1-C_{10}$, preferably a linear or branched when possible C_1-C_5 alkyl,
- Z^I, Z^{II} equal or different have the values of Z as above, depending on that T_B and/or $T_{BI} = CO$ or X , in function of the values of t, t', tx and txx ;

it satisfies the following test (test 4): analytical de-

termination carried out by adding aliquots of methanolic solutions at 10^{-4} M concentration of the precursor of B to a methanolic solution of DPPH (2,2-diphenyl-1-picrylhydrazyl); after having maintained the solution at room temperature and sheltered from light for 30 minutes, the absorbance of the test solution and of a solution containing only DPPH in the same amount is read, at the wavelength of 517 nm; then the inhibition percentage of the precursor of B towards the radical production induced by DPPH is determined by means of the formula:

$$(1 - A_s/A_c) \times 100$$

wherein A_s and A_c are respectively the absorbance values of the solution containing the test compound and DPPH and that of the solution containing only DPPH.

The acceptance criterion of the precursor compounds of B according to this test is the following: test 4 is satisfied by the precursor compounds of B when the inhibition percentage as above defined is higher than or equal to 50%.

2. Use according to claim 1, wherein:

- when in formula (IV) $q_A = 1$ and G is the group of formula (Vg) wherein R_a is methyl and R_b is hydrogen, $q_2 = q_4 = 0$, $M = C$, and in formula (V) $q_1 = 1$, $Q = -CH-$ and $q_3 = 0$, the ring of formula (IV) comprising M and Q is an aromatic ring having 6 carbon atoms and the other substituents are as defined hereinafter:

- when $R_c = R_g = R_e = H$ and R_d is isobutyl, the so defined precursor drug of R is ibuprofen;
- when $R_c = R_g = H$ and R_d is phenyl and R_e is F, the so defined precursor drug of R is flurbiprofen;

- when $R_c = R_g = H$ and R_d and R_e form together the radical of formula (IX), the so defined precursor drug of R is naproxen;
- when $R_c = R_g = R_e = H$ and R_d is the radical of formula (VIII), the so defined precursor drug of R is loxoprofen;
- when $R_c = R_g = R_d = H$ and $R_e = \text{benzoyl}$, the so defined precursor drug of R is ketoprofen;
- when $R_c = R_g = H$ and R_d and R_e form together the radical of formula (X), the so defined precursor drug of R is carprofen;
- when in formula (IV) $q_A = 0$, $q_2 = q_4 = 0$, $R_d = R_g = H$, $M = C$, and in formula (V) $q_1 = 1$, $Q = -CH-$, $q_3 = 0$, $R_e = H$, the ring of formula (IV) comprising M and Q is an aromatic ring having 6 carbon atoms and the other substituents are as defined hereinafter:
 - when R_c is the radical of formula (VI) wherein $R_M = R_p = H$, $R_o = CF_3$ and is in meta position with respect to the $-NH-$ group, the so defined precursor drug of R is the flufenamic acid;
 - when R_c is the radical of formula (VI) wherein $R_M = R_p = Cl$ and are in the two ortho positions with respect to the $-NH-$ group, $R_o = CH_3$ and is in para position with respect to the $-NH-$ group, the so defined precursor drug of R is the meclofenamic acid;
 - when R_c is the radical of formula (VI) wherein $R_M = H$, $R_p = Cl$ and is in meta position with respect to the $-NH-$ group, $R_o = CH_3$ in ortho position with respect to the $-NH-$ group and to the chlorine atom,

the so defined precursor drug of R is the tolfenamic acid;

- when in formula (IV) $q_A = 0$, $M = N$; $q_2 = q_4 = 0$, $R_d = H$; and in formula (V) $q_1 = 1$, $q_3 = 0$, $R_e = H$, $Q = -CH-$; R_g is the free electronic doublet on the nitrogen atom, the ring of formula (IV) comprising M and Q is a pyridine ring, R_c is the radical of formula (VI) wherein $R_M = R_P = H$, $R_O = CF_3$ and is in meta position with respect to the $-NH-$ group, the so defined precursor drug of R is the niflumic acid;

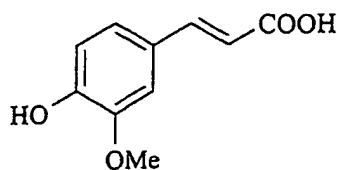
- when in formula (IV) $q_A = 1$ and G is the group of formula (Vg) wherein $R_a = R_b = H$; $M = C$, $R_d = R_g = H$, $q_2 = q_4 = 0$; and in formula (V) $q_1 = 1$, $Q = -CH-$, $R_e = H$, $q_3 = 0$; the ring of formula (IV) comprising M and Q is an aromatic ring having 6 carbon atoms; R_c is the radical of formula (VI) wherein $R_M = R_P = Cl$ and are in the two ortho positions with respect to the $-NH-$ group, $R_O = H$; the so defined precursor drug of R is diclofenac;

- when in formula (IV) $q_A = 1$ and G is the group of formula (Vg) wherein $R_a = R_b = H$; $M = C$, $q_2 = q_4 = 1$, $R_d = R_{d1} = H$, $R_N = \text{ethyl}$, and in formula (V) $q_1 = 1$, $q_3 = 1$, $Q = O$, $R_e = R_{e1} = H$; the ring of formula (IV) comprising M and Q is a saturated ring having 6 atoms; R_g and R_c together form the radical of formula (VII), the so defined precursor drug of radical R is etodolac;

- when in formula (IV) $q_A = 1$ and G is the group of formula (Vg) wherein $R_a = R_b = H$; $M = N$ $q_2 = q_4 = 0$; and in formula (V) $q_3 = q_1 = 0$, the ring in formula (IV) comprising M corresponds to that of pyrrol; $R_g = p\text{-chlorobenzoyl}$; $R_c = CH_3$; R_d together with R_e of formula

(V) form the radical of formula (IX), the so defined precursor drug of radical R is indomethacin.

3. Use according to claim 1, wherein when in formula (IV) $q_A = 1$ and $G = -HC=CH-$, $q_2 = q_4 = 0$, $M = C$, and in formula (V) $q_1 = 1$, $Q = -CH-$, $q_3 = 0$ and $R_e = H$, the ring of formula (IV) comprising M and Q is an aromatic ring having 6 carbon atoms; $R_c = H$, $R_g = OCH_3$, $R_d = OH$, the so defined precursor drug of radical R is the ferulic acid of formula (IVA)



(IVA)

4. Use according to claims 1-3, wherein the precursor compound of B which satisfies test 4 is selected from the following classes of compounds:
- aminoacids, selected from the following: L-carnosine, anserine, selenocysteine, selenomethionine, penicillamine, N-acetylpenicillamine, cysteine, N-acetylcysteine, glutathione or esters thereof, preferably ethyl or isopropyl ester;
 - hydroxyacids, selected from the following: gallic acid, ferulic acid, gentisic acid, citric acid, caffeic, dihydrocaffeic acid, p-cumaric acid, vanillic acid;
 - aromatic and heterocyclic polyalcohols, selected from the following: nordihydroguaiaretic acid, quercetin, catechin, kaempferol, sulphuretin, ascorbic acid, isoascorbic acid, hydroquinone, gossypol, re-